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A CHART OF FOUR CONTEMPORARY RESEARCH PARADIGMS: METAPHORS FOR THE MODES OF INQUIRY

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The chart around which this article is written is the result of our collaborative attempt to describe (by visual representation, abstract language, and the language of symbol and metaphor) the range of "places to stand" (Denzin & Lincoln, 1994) used by contemporary researchers in education. In what follows, we will explain various parts of the chart, providing a rationale for the choices we made; and in doing so, we will refer to some of the sources/resources which we found heuristic in developing it.

We begin with several qualifications. (1) It does not seem satisfactory to divide the research world (Glesne & Peshkin, 1992 or MaGuire, 1987) into dichotomous "quantitative-qualitative" or "dominant-alternative" categories. Although the positivist paradigm is legitimately described as a univocal whole, qualitative research is too diverse to be described in a unified set of propositions. Even the choice of the four categories (positivist, interpretivist, critical theory, and deconstructivist) is to a certain degree arbitrary, and the lines between them are not intended to represent rigid or unchanging differences/boundaries. (2) There is research (for example, Jones, 1992) which can have several "moments" where different paradigms are employed for different purposes. Moreover, there is also research (notably the feminist research cited in Lather, 1994) which, while naming itself according to the critical paradigm, seems to partake of the "flavor" of several, and so refuses classification. Terminology may be used in conflicting ways (for example, the different uses of the term "postpositivist" by Denzin and Lincoln, 1994, and Sparkes, 1992). (3) All discourse is influenced (and to a certain extent, formed) by gender, race/ethnicity, socio-economic class, and culture. Thus, the entire chart may be problematic for people who do not share western culture, which is linear in its thought process, and which proceeds by the making of distinctions. Harding (1993) and Stanfield (1985) speak to this issue, suggesting that non-western cultures may have difficulty with the entire set of projects which the chart attempts to represent. (4) The chart does not contain any representation of method, since virtually any method could be utilized within any methodological or paradigmatic perspective. (Some methods, particularly sophisticated statistical tools, probably "fit" more comfortably in a certain [positivist] paradigm, but it is certainly an error to conceptualize each paradigm as employing a particular

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method.) (5) The chart is to be seen as a provisional representation of our current state of thought, and is one moment in an evolving understanding which we hope will develop further. The neat and tidy arrangement is not intended to imply a fully formed conception.

The choice of *type-face styles* for the heading of each column occasioned much discussion, as we tried to match the font with the paradigm and to indicate the "tone" of each paradigm. Thus, the **POSITIVIST** font is confidently assertive in all capitals, but not shrill, with no need to justify itself; traditional, with understated serifs; unemotional. The *Interpretivist*: more natural, (dis)curious; less "upright"; more inviting and user-friendly. The **Critical theory**: brash, in-your-face; modern, with no curlicues or nonsense about it; making a bold statement; suitable for use on a (political) poster. The **Deconstructivist** unexpected, quirky, full of nervous energy; kinky, with less definable boundaries; less "categorizable" in traditional terms.

In the first row of the chart, we have tried to represent visually some of the dynamics of research in each paradigm, especially the relationship of the researcher to the researched. In the positivist paradigm, the researcher decides in advance what is going to be done, and then implements the plan; the researched (who are subjects) do not participate in either making the plan or modifying the plan as it is being carried out. Thus, the arrow is in only one direction. In the interpretivist paradigm, there is an ongoing, reciprocal influence between the researcher and the researched, and the researched are not subjects, but rather valued "others," whose perspectives and worldview the researcher attempts to discover (Belenky, et al, 1986). In critical theory, the researcher joins the researched in an effort to not only understand the worldview of the researched, but to assist in changing it in some way (Sparkes, 1992; McCutcheon & Jung, 1990). In the deconstructivist paradigm, the researched and the researched are in a close and reciprocal arrangement, but the worldviews of both parties are questioned and probed in new directions, particularly with respect to the semiotic systems of meaning (primarily language) employed in understanding the situation.

In the next row of the chart, we have outlined the ontological assumptions or axioms of each of the paradigms. For positivism, reality is "out there," and our job is to discover the objectively true laws which govern it. Ontologically, positivists believe that we do not make the world; the world is a given, and we find the meanings which are already inherent in reality. Thus we "discover," through careful thought and correct methods, what is already the case (McCutcheon &

POSITIVIST	<i>Interpretivist</i>	Critical Theory	Deconstructivist
Reality is objective and "found"	Reality is subjective and constructed	Reality is subjective and constructed on the basis of issues of power	Reality is ultimately unknowable; attempts to understand it subvert themselves
Truth is one	Truth is many	Truth is many, and constitutes a system of socio-political power	"Truths" are socially constructed systems of signs which contain the seeds of their own contradiction
Discourse is structured and transparent, reflecting reality	Discourse is dialogic and creates reality	Discourse is embedded in (and controlled by) rhetorical and political purpose	Discourse is by nature inseparable from its subject, and is radically contingent and vulnerable
What is true? What can we know?	What is heuristic? What can we understand?	What is just? What can we do?	Is there a truth? What constitutes truth?
Knowing the world	Understanding the world	Changing the world	Critiquing the world
Communication as transmission	Communication as transaction	Communication as decision-making	Communication as challenging the nature of communication

POSITIVIST	<i>Interpretivist</i>	Critical Theory	Deconstructivist
<i>If this research paradigm were a color, it would be:</i>			
blue (cool, "scientific," objective)	green (natural, symbolic of organic growth)	red (dynamic, action-oriented)	black (absence or denial of color)
<i>If this research paradigm were a public event, it would be:</i>			
a marching band or classical ballet (precise, rule-dominated)	community picnic (cooperative, interactive, humanistic)	a March of Dimes telethon (active, purposeful, concerned with marginal groups)	a circus, amusement park, or carnival (multiplicity of perspectives and stimuli; no single reference point)
<i>If this research paradigm were a personality disorder, it would be:</i>			
obsessive-compulsive (orderly, structured, no loose ends allowed!)	co-dependent (interactive with others, other realities impinge profoundly)	manic-depressive (rage against unjust power structures; bleak worldview with outbreaks of enthusiastic activism)	psychotic (the self disintegrates into solipsism; no stable point, either inside or outside the self)
<i>If this research paradigm were a game, it would be:</i>			
Tetris (exacting, quantitatively oriented, uses computer)	Clue (exchanges with other players inform decisions)	Monopoly (a world constituted by economic struggles)	Candyland (unconcerned with reality; played either by children or the extremely sophisticated)

POSITIVIST	<i>Interpretivist</i>	Critical Theory	Deconstructivist
<i>If this research paradigm were a sport, it would be:</i>			
golf (boring, individual, fastidious, exacting)	tennis (interactive, interdependent, labor intensive)	midnight basketball (collaborative, intended to change society; oppressed participate in self-empowerment)	professional wrestling (is it real? non-reality disguised as reality; simultaneous acceptance and denial of what is real)
<i>If this research paradigm were a celebrated figure, it would be:</i>			
Anita Bryant Napoleon (sure of their position; calculating)	Florence Nightingale Dag Hammarsjold (receptivity to others; ability to entertain multiple viewpoints)	Susan B. Anthony Karl Marx (activists; concerned with oppressed groups)	kd lang Woody Allen (self-contradictory; quirky; they carve out their own space)
<i>The researchers in this paradigm would drink:</i>			
Scotch on the rocks (conventional, "hard" liquor for "hard science," hegemonic)	Californian white wine (natural, convivial, social, interactive)	Vodka (the revolutionary's drink; fiery, subversive)	Zima (defies categorization; neither wine, nor beer, nor hard liquor; trendy)

A Chart of Four Contemporary Research Paradigms

Jung, 1990). For interpretivists, the world is constructed by each knower/observer according to a set of subjective principles peculiar to that person. In critical theory, there seems to be much similarity to the interpretivist stance regarding most of the features of reality; but the *socio-politico-economic features* of reality are taken as objectively real, and not dependent on the perspective of the observer. For critical theory, then, the power structure is "out there" and "found." For deconstructivists, reality is not "out there," but is actually *constituted* by the system of signs/symbols we use to perceive it; and this system of signs is an imperfect medium, like a distorting lens. Language is not transparent, but is freighted with the values and worldview of those who use it. Therefore, reality is ultimately unknowable.

In epistemological terms, the next five rows of the chart indicate that each paradigm has a different view of (a) the nature of truth; (b) how we talk about truth (discourse); (c) what is possible to know; (d) what is the purpose of knowing; (e) and how we communicate. For positivists, truth is one in the sense that it is the same for everyone at every time and in every place. Our discourse about truth takes the form of logical propositions which can be proved or disproved by the process of logic itself, the dynamics of which are not questioned (by positivists!) The basic questions which are considered most salient and interesting are questions of what is true and what is possible to know; and therefore the positivist project boils down to an attempt to know the world as it is, and to communicate that knowledge to others in an objective and undistorted way.

For interpretivists, there are many truths, because there is no airtight distinction between the knower and what is known; and discourse assumes the form of a dialogue between various knowers, as they attempt to describe and understand the world from the point of view of someone else. Interpretivists attempt to understand situations from the point of view of those experiencing the situations, and are concerned with what will assist them in doing so—what is heuristically powerful. Communication is viewed as a give-and-take, transactive process, where X and Y inform and influence each other.

Critical theorists agree with interpretivists that there are multiple truths, but believe that there is one truth which undergirds all the rest, and is not dependent on who is observing it; that truth is the reality of political and economic power. Critical theory assumes that all discourse is enmeshed in the rhetorical and political purposes of those who speak or write. The project of critical theory is to discover what is just and to take action; since knowledge is a form of power, it can

be used to change the world into a more just and equitable place for all groups of people. Critical theorists view communication in this same active light: communication is for the purpose of deciding what to do to change the world, and how to best accomplish this.

In deconstructive thought, the relativism implied in interpretivism and critical theory is taken to its ultimate limit: deconstructivists assert that formulations of truth are always embedded in language, which can be shown to be self-contradictory at certain points. For deconstructivists, there is not only no subject-object distinction, but, even more radically, *how* we talk about subjects/objects is not logically separable from *what* we talk about. We can't get "outside" our own symbol systems, and are therefore constrained by their vulnerability; thus, the distinction between *known* and *knower* collapses completely. Deconstructivism seems less interested in truth than in questioning every possible basis on which we could discover or construct it; it therefore represents the stance of critiquing the world, and seeks to undermine or probe the ways we communicate with each other. From a deconstructivist perspective, our "networks of regularity" (Scheurich, 1994), whether social or linguistic, are revealed as radically unstable and subjective.

Up to this point, the chart has been a rather abstract, ho-hum representation of standard "paradigm talk." The next part of the chart is an attempt to break out of this abstract, jargon-ridden discourse to a more holistic, concrete, and sensual view of the paradigms; in a sense, this part of the chart might be viewed as a deconstructive move to trouble the stuffy and overly intellectualized perspective we have employed so far. In Sparkes' (1992) terminology, this part of the chart represents an attempt to build up a "portrait" of each paradigm: the brush strokes in this portrait are not abstract terms, but rather symbols and metaphors. Besides giving an affective dimension to our representation (and maybe giving you a good laugh), these symbols and metaphors, taken together, present a holistic Gestalt of each paradigm. In order to formulate this Gestalt, we have had to synthesize many pieces of information, and build up knowledge across cases (Spiro, et al, 1994). These metaphors and symbols attempt to "story" about the paradigms; to stroll around them, so to speak, and form the beginnings of a three-dimensional, "thick" description which is less dependent on abstractions, and reveals more of our "tacit knowledge" (Polyani, 1962).

The chart includes brief explanatory comments which indicate the rationale for our choices, which we want to justify in more detail. "Color," for example, is not value free, but has certain affective and

symbolic associations which vary according to culture. In our culture, blue is considered a "cool" color, somewhat detached (in comparison with the "warm" colors—red, yellow, orange). Blue is also one of the colors of hegemony ("royal blue") and the color of the overarching sky. It could be taken, therefore, as a nonverbal sign for the positivist paradigm, which is still hegemonic, and attempts an objective, "cool," detached, "God's eye" view of phenomena. Green, while still a "cool" color, is the typical color of nature and growth; it seems an appropriate sign for naturalistic research, in which the codes and categories "grow out of" or emerge from the data, rather than being determined beforehand. The coolness of green is appropriate to the stance of the researcher in interpretivism, which attempts neutral description rather than active intervention. Critical theory, on the other hand, demands a color-sign which is energetic, "hot," and affectively charged; in our culture, red seems to symbolize these qualities (besides being the pre-eminent color of Marxism, which is an important component of critical thought). Deconstructivism, which questions all semiotic systems (verbal or nonverbal), and which denies that any language transparently reflects or conveys reality, is symbolized by black, the absence or denial of color. Much deconstructivist literary criticism has a "black humor" quality, and this is another reason for assigning it this color. The color metaphor has another dimension; colors can combine with each other in various shades and tints. This fluid quality suggests that the boundaries between the paradigms are equally fluid and capable of being combined with each other.

As we discussed these (admittedly quirky) metaphors, we discovered that we had somewhat different attitudes to positivism. Sue felt that a marching band represented the precise, rule-governed, and orderly nature of positivism. While agreeing with these characteristics, Larry felt that positivism was also quite elegant (if a little old-fashioned), and that the classical ballet was a sign which embodied this elegance and traditionalism, in addition to precision and order. As well, classical ballet is usually performed in a theater, a special, set-apart place which is also patronized and supported by the socio-economic hegemony; thus paralleling positivism's penchant for "clinical" situations apart from "natural settings" and its cozy relationship with the structures of power and privilege. In talking about these metaphors, we constructed a better understanding of our own positions.

In discussing what we referred to as the "obsessive-compulsiveness" of positivists, we happened upon another category:

personality disorders. Positivists could be classified as obsessive-compulsive because of their concern with precise method, and the rigidity with which they make and define their observations. The co-dependency of interpretivists is a result of their desire to understand and be understood by their chosen other. Like co-dependents, interpretivists are not necessarily proactive, but they do care. Manic-depressive behavior is that which fluctuates from pensive introversion and brooding hostility to intense activity and involvement. In a similar way, the critical theorists checks out the surrounding realities, finding injustices caused by the domain of power, and mobilizes participants to co-create a better world. A person who is psychotic has lost contact with reality, not unlike the deconstructivist, who questions the existence of reality altogether.

The nature of games and sports is as varied as the nature of paradigms. The methodical positivist might enjoy recreation requiring the slow, scientific structure of Tetris or golf. An interpretivist would be more inclined to participate in something interactive, but not intermingled, such as Clue, or tennis. A critical theorist might be comfortable engaged in a game of Monopoly—acknowledgeably structured within a perspective of society which affords another chance to scrutinize the injustices of socially created power. Midnight basketball is a critical theorist's dream: working collaboratively with the oppressed toward empowerment and positive social change. Deconstructivists would savor the ironies and ambiguities of professional wrestling—is it really real, or do we just pretend to believe it is real? Does our superficial perception of its reality constitute and uphold its existence? As Bishop Berkeley might have commented, "*to exist as a professional wrestler is to be perceived.*"

Our prejudices probably come across most forcefully in the people we have chosen as symbols for the paradigms. It was most difficult to come up with people to represent positivism, and it is possible that we are being somewhat unfair in using Anita Bryant and Napoleon as exemplars. There is, however, a humorless quality about positivism which resists our postmodern larking about, and perhaps the most representative person for this paradigm would be a well-known positivist: "not the symbol, but the thing itself."

It's interesting to take this part of the chart and to read *down* through the columns as well as *across* the rows. When we do this, we get a "feel" for, say, *interpretivism* as we contemplate Florence Nightingale and Dag Hammarskjöld trying to understand each other's point of view about war while playing Clue as participant-observers at

a community picnic and enjoying a glass of white wine together, with the prospect of an interactive game of tennis afterwards. Or take deconstruction: Woody Allen (sardonic and self-mocking) and kd lang (who plays western cowhand music but totally eschews red meat!) ironically commenting on the real—but—fake exertions of Hulk Hogan and Lex Luther as they (Allen and lang) drink Zima and talk about Disneyland as a simulacrum or a semiotic daydream.... It works for us!

In conclusion, the paradigms are useful vantage points or “places to stand,” but they are all provisional and tentative. We feel that there is a great danger in taking these vantage points too much for granted, and in becoming a rigid adherent—a “true believer.” If taken too far, what would the extremes of each paradigmatic position become? Here are some suggestions:

<i>The extremes of the paradigmatic stances</i>	
POSITIVIST	<i>Interpretivism</i>
arrogant, assertive, individual insensitivity	airhead, communal, inconsequential relativism
Critical Theory	Deconstructivism
grim, deterministic mechanical reductionism	nihilistic, sneering solipsistic cynicism

Searching for meaningful metaphorical representations and attempting to convince one another of our choices forced us to articulate and expand the boundaries of our thought processes. In this sense, the process of creating this chart was more important than the final product, and we commend this exercise to you. We found that it gave us a richer and more imaginative grasp of each paradigm, and enabled us to view the paradigms from a less rigid perspective. As Denzin and Lincoln (1994) point out, “paradigms as overarching philosophical systems denoting particular ontologies, epistemologies, and methodologies cannot be easily moved between. They represent belief systems that attach the user to a particular worldview” (p. 2). A metaphorical view of the paradigms allows us to conceptualize them in more fluid ways.

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